

In the Office Action, the Examiner objected to the specification because the title of the invention is not descriptive; and rejected claims 1, 2, 4-6, and 10-15 under 35 U.S.C. §103(a) as being unpatentable over the related art illustrated in Figures 3 and 4 in view of Hiroshige et al. (JP 62-091917). The objection to the title and rejection of these claims is traversed and reconsideration of the claims is respectfully requested in view of the amendment above and the following remarks.

Preliminarily, while it is asserted in both the Office Action Summary and in paragraph 6 of the Office Action that claim 3 is rejected, Applicants respectfully submit the subject matter of claim 3 was not actually rejected. Clarification on the status of claim 3 is hereby respectfully requested.

The Examiner objected to the title of the invention as not being clearly indicative of the invention to which the claims are directed. Although Applicant believes that the title of the invention is clearly indicative of the invention, for the purpose of expediting the prosecution of this application, the title has been changed. Therefore, Applicant requests the withdrawal of this objection.

The rejection of claims 1, 2, 4-6, and 10-15 under 35 U.S.C. §103(a) as being unpatentable over the related art illustrated in Figures 3 and 4 in view of Hiroshige et al. is traversed and reconsideration is respectfully requested.

Independent claim 1 is allowable over the cited art in that claim 1 recites a combination of elements including, for example, "a liquid crystal panel having a plurality of gate and data lines and a plurality of sub-pixels,... wherein each sub-pixel is defined by the gate and data lines and corresponds to a strip-shaped color filter... a black matrix arranged among the strip-shaped color filters." None of the cited references including the related art

illustrated in Figures 3 and 4 or Hiroshige et al., singly or in combination, teaches or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that independent claim 1 and claims 2-6, which depend therefrom, are allowable over the cited references.

Independent claim 10 is allowable over the cited art in that claim 10 recites a combination of elements including, for example, “a first substrate having deposited thereon a plurality of stripe-shaped color filters and a black matrix arranged around the stripe-shaped color filters..., a second substrate... having... a plurality of sub-pixels each formed at an intersection of one of the gate lines and data lines.” None of the cited references including the related art illustrated in Figures 3 and 4 or Hiroshige et al., singly or in combination, teaches or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that independent claim 10 and claims 11-15, which depend therefrom are allowable over the cited references.

The Examiner cites the related art illustrated in Figures 3 and 4 as differing “from the claimed invention because it does not explicitly disclose that the color filters are stripe-shaped and a black matrix is arranged among the stripe-shaped color filters. The Examiner relies on Hiroshige et al. to cure the deficiencies of the related art illustrated in Figures 3 and 4 by stating “Hiroshige discloses a liquid crystal display device having stripe-shaped color filters. [Hiroshige] also discloses that by forming stripe-shaped color filters in a display it is possible to see the display patterns easily (abstract). Hiroshige is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use stripe-shaped color filters in a liquid crystal display device.” The Examiner then concludes “...it would have been obvious to one of ordinary skill in the art... to modify the display

device [illustrated in Figures 3 and 4] such that use stripe-shaped color filters so that a display pattern that is easy to see is obtained, as per the teachings of Hiroshige.” Lastly, the Examiner attempts to cure deficiencies of the related art illustrated in Figures 3 and 4 in view of Hiroshige et al. by stating “...forming black matrix among stripe-shaped color filters is common and known in the art for several reasons... and thus would have been obvious.” (Office Action at 7).

Contrary to the Examiner’s aforementioned conclusions and assertions, Applicants respectfully submit a *prima facie* case of obviousness has not been established at least in rejecting claims 1 and 10. To establish a *prima facie* case of obviousness, (1) the reference must teach or suggest all the claim limitations; and (2) there must be at least some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference. M.P.E.P. § 2143.

First, Applicants respectfully submit the cited references, either singly or in common, fail to teach or suggest all the claim limitations. While not using the words “Official Notice”, the Examiner attempts to cure the deficiencies of the related art illustrated in Figures 3 and 4 in view of Hiroshige et al. by asserting the obviousness of forming a black matrix among stripe-shaped color filters. Accordingly, it appears that the Examiner is relying on Official Notice. The Examiner may take Official Notice of facts outside of the record that are capable of instant and unquestionable demonstration as being “well-known” in the art. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). As set forth in M.P.E.P. § 2144.03, if an applicant traverses an assertion made by an Examiner while taking Official Notice, the Examiner should cite a reference in support of their assertion. Accordingly, Applicant

seasonably traverses the use of Official Notice and respectfully, requests the Examiner to provide a reference to support their assertions or an affidavit.

Second, while there must at least be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference, a statement that modifications of the related art illustrated in Figures 3 and 4 to meet the claimed invention “would have been obvious” because references relied upon to suggest aspects of the claimed invention were individually known is not sufficient to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, at least some objective reason to modify the reference must be present.

M.P.E.P. § 2143.02.

Applicants respectfully submit Hiroshige et al. discloses in the Abstract, “color filter 5 is formed on not only segment electrodes 3 but also on a glass plate, where segment electrodes 3 do not exist...” Hiroshige et al. conclude by stating “[b]y this constitution, the display pattern of number ‘3’ is made easy to see because non-lit segment part B and a non-segment part C of segment electrodes 3 have the same color and it is difficult to distinguish them from each other.” By contrast, the related art illustrated in Figures 3 and 4 does not disclose segment electrodes such as those disclosed in Hiroshige et al. Further, the related art illustrated in Figures 3 and 4 does not disclose a display device where a “non-lit” area of the display being capable of being “lit” must be substantially indistinguishable from a portion of the display device that is completely incapable of being “lit”. Rather, the related art illustrated in Figures 3 and 4 merely discloses at page 4, lines 11-14 “FIG. 3 is a plan view illustrating a... quad type color LCD device. A liquid crystal panel 111 generally includes a number of dots, and each unit pixel includes four sub-pixels or dots: an RGBW (red, green,

blue, and white) arrangement as shown in FIG. 3 or an RRGB (red green, green, blue) arrangement (not shown).” Accordingly, Applicants respectfully submit Hiroshige et al. actually teaches away from the related art illustrated in Figures 3 and 4.

Applicants respectfully submit there is no objective reason to arrange the color filters of Hiroshige et al., specifically designed to be formed over segment electrodes and to make regions of non-lit segments and non segment areas indistinguishable, over the quad type color LCD device of the related art illustrated in Figures 3 and 4. Accordingly, Applicants respectfully submit the Examiner’s assertion that it would have been obvious to modify the related art illustrated in Figures 3 and 4 with the teachings of Hiroshige et al. because “a display pattern that is easy to see is obtained, as per the teachings of [Hiroshige et al.]” is insufficient to establish a *prima facie* case of obviousness.

With respect to the rejection of claims 2, 4-6, and 12-16, the Examiner makes a number of statement alleging the obviousness of the aforementioned claims. For example, in rejecting claim 2, the Examiner states “...as to the white color being made of a transparent resin is common and known in the art and thus would have been obvious to avail a proven material”; in rejecting claims 4, 5, 14, and 15, the Examiner states “...using the gate driver IC to alternate polarity of a gate line driving signal either for each of the gate lines at each frame interval or for adjacent gate lines during a same frame interval are common and known in the art and thus would have been obvious to avail a proven technique”; in rejecting claims 6 and 12, the Examiner states “...using the data driver IC to drive adjacent odd and even numbered data lines is common and known in the art and thus would have been obvious to optimize driving performance”; and in rejecting claim 13 the Examiner states “...it is known

that a single liquid crystal display panel comprises a plurality of sub-pixels. Therefore, it would have been obvious... that each data line is connected to a plurality of sub-pixels..."

While the Examiner does not use the words "Official Notice", it appears that the Examiner is relying on Official Notice. The Examiner may take Official Notice of facts outside of the record that are capable of instant and unquestionable demonstration as being "well-known" in the art. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). As set forth in M.P.E.P. § 2144.03, if an applicant traverses an assertion made by an Examiner while taking Official Notice, the Examiner should cite a reference in support of their assertion. Accordingly, Applicant seasonably traverses the use of Official Notice and respectfully, requests the Examiner to provide a reference to support their assertions or an affidavit.

Applicants believe the application in condition for allowance and early, favorable action is respectfully solicited. Should the Examiner deem that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at (202) 496-7500.

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Group Art Unit: 2871

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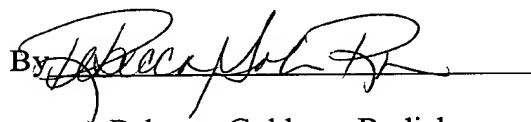
If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

MCKENNA LONG & ALDRIDGE, LLP

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PATENT TRADEMARK OFFICE

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**MARKED UP VERSION OF THE AMENDED TITLE**

LIQUID CRYSTAL DISPLAY DEVICE HAVING STRIPE-SHAPED    COLOR FILTERS